



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/657,411

Filing Date: September 8, 2003

Applicant: Mauer et al.

Group Art Unit: 3726

Examiner: David R. Bryant

Title: SELF-PIERCING RIVET, PROCESS AND DEVICE FOR  
SETTING A RIVET ELEMENT, AND EMPLOYMENT THEREOF

Attorney Docket: 0275M-000768

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Director of the United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

**I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION**

The patents, publications and other information requested to be considered by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

**II. COPIES**

A. ☐ Submitted herewith is a legible copy of (i) each U.S. patent application publication and U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; (iii) for each cross referenced pending U.S. application listed below in Section IV, the application specification including the claims, and any drawing of the application which caused it to be listed including the claims directed to that portion; and (iv) all other information or that portion which caused it to be listed.

B. ☐ Any patents, publications or other information which are listed on Form 1449 or on the copies of PTO-892, but which are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Serial Number

U.S. Filing Date

C. ☒ Because the present application was/is being filed after June 30, 2003, no copies of the U.S. patents or U.S. patent application publications which are listed on the attached Form 1449 are enclosed pursuant to the waiver of 37 C.F.R. § 1.98(a)(2)(i). Any foreign patent documents or non-patent literature listed on the attached Form 1449 are enclosed herewith.

D. ☐ This is a PCT application in the entry of the National Phase in the United States. A copy of the International Search Report is attached for the Examiner's information. The documents listed on the International Search report are listed on the attached Form 1449 for consideration by the Examiner and for listing on any patent resulting from this application. If the International Search report was from the US, EPO, or JPO search authorities, copies of these references should have been supplied to the USPTO under the trilateral agreement and are believed to be in the file of the above-identified application. (MPEP 1893.03(g).)

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

A. ☒ Except as may be indicated below in (B), all of the patents, publications or other information are in the English language (concise explanation not required).

B. ☒ A concise explanation of the relevance of each patent, publication or other information listed that is not in the English language is as follows (see 37 C.F.R. § 1.98(a)(3)):

1. ☐ See the attached foreign patent office communication from a counterpart foreign application:

2. ☐ English translations are provided:

3. ☒ Other:

EP 0 351 715 appears to show two thin structural elements (7, 8) fastened together by a tubular rivet (1) which is placed in position by an explosive driven tool. The tool has a barrel (12) which guides a piston (11) with a central bore to receive a mandrel (2). The lower end of the mandrel has a head (6) with a shaping edge (6a). The mandrel passes through the bore of the tubular rivet so

that the rivet is held against the piston. The barrel is placed over the structural elements, and the piston is driven downwards by the explosive charge. The mandrel punches holes in the elements for the rivet and a rivet head is formed by pulling the mandrel upwards causing the mandrel to break at a groove (5a).

DE 26 54 718 appears to show two metal plates (1a, 1b) held together in the anvil (4) and in between the washer (5) and under pressure from the gun head (2a). The rivet (3) has a pointed end and a head. It is fitted with a washer under the head. The gun has a plunger (2b) which fires the rivet through the plates and the washer (5). The gun may be removed through the hole in the anvil, and the riveted plates are removed through the slot in the side of the anvil. The plunger is actuated by means of an explosive cartridge in the gun.

DE 1 625 359 appears to show the rivet or stud (1) having a shank (3) of reduced diameter which is of polygonal cross-section. There is a small central hole in the shank which is enlarged by countersinking at the end. The maximum diameter of the countersinking is slightly greater than the distance across the flats of the polygonal cross-section so that longitudinal cracks are formed. When the stud or rivet (1) is driven into hard material (5) such as steel, the walls of the countersunk hole are splayed outwards to form claws (3a) which ensure a firm grip for the stud (1) even in relatively thin material. The central hole may be extended right through the stud to provide an escape for trapped air.

C. ☐ The following additional information is provided for the Examiner's consideration.

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A. ☐ The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this(these) application(s) to the Examiner's attention, Applicant(s) does (do) not waive the confidentiality provisions of 35 U.S.C. § 122.

Serial No.

Filing Date

Art Unit

V. THIS IDS IS BEING FILED UNDER

A. ☒ **37 C.F.R. § 1.97(b):** (check only one box)

1. ☐ within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.

2. ☐ within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or certification is required.

3. ☒ before the mailing of a first Office Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below; or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).

4. ☐ before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No fee or certification is required.

B. ☐ **37 C.F.R. § 1.97(c):** (check only one box)

before the mailing date of either any Final Office Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution.

1. ☐ No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

2. ☐ See the certification below. No fee is required.

C. ☐ **37 C.F.R. § 1.97(d):**

after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.

1. ☐ See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

VI. **CERTIFICATION UNDER 37 C.F.R. § 1.97(e):** (check only one box)

The undersigned hereby certifies that:

A. ☐ each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. §

1.97(e)(1)). See further statement under 37 C.F.R. 1.704(d) below in section VII, if applicable; or

B. ☐ no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).

C. ☐ some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.

VII. STATEMENT UNDER 37 C.F.R. 1.704(d)

The undersigned hereby states that:

☐ each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this IDS.

VI. PAYMENT OF FEES (check only one box)

A. ☐ A check in the amount of \$180.00 is enclosed for the above identified fee.

B. ☐ Please charge Deposit Account No. 02-2550 in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

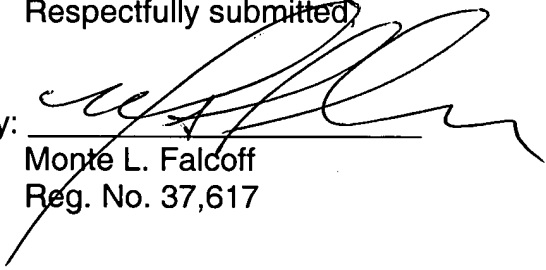
The above references are being cited only in the interest of candor and without any admission that they constitute statutory prior art, contain matter which anticipates the invention, or which would render the same obvious, either singly or in combination, to a person of ordinary skill in the art. Furthermore, this Information Disclosure Statement shall not be construed as a representation that a search has been made.

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 02-2550.

Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 02-2550.

Respectfully submitted,

Dated: December 29, 2004

By:   
Monte L. Falcoff  
Reg. No. 37,617

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MLF/lkj



FORM HDP-1449 (Based on Form PTO-1449)

**PATENT AND TRADEMARK OFFICE  
INFORMATION DISCLOSURE CITATION**

(Use several sheets if necessary)

Sheet 1 of 2

ATTORNEY DOCKET NO.

275M-000768

SERIAL NO.

10/657,411

APPLICANT

Mauer et al.

FILING DATE

September 8, 2003

GROUP

3726

**U.S. PATENT DOCUMENTS**

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.		4,781,500	11/1988	Mauer		
2.		4,836,728	6/1989	Mauer et al.		
3.		5,110,029	5/1992	Blake		
4.		5,125,151	6/1992	Smart		
5.		5,167,585	12/1992	Williams		
6.		5,237,733	8/1993	Ladouceur et al.		
7.		5,259,713	11/1993	Renner et al.		
8.		5,323,946	6/1994	O'Connor et al.		
9.		5,337,463	8/1994	Rossler et al.		
10.		5,403,135	4/1995	Renner et al.		
11.		5,490,312	2/1996	Smith		
12.		5,600,878	2/1997	Byrne et al.		
13.		5,645,383	7/1997	Williams		
14.		5,658,107	8/1997	Smith		
15.		5,661,887	9/1997	Byrne et al.		
16.		5,666,710	9/1997	Weber et al.		
17.		5,759,001	6/1998	Smith		
18.		5,960,667	10/1999	Hylwa et al.		
19.		6,032,510	3/2000	Smith et al.		
20.		6,115,900	9/2000	Cerulo et al.		
21.		6,224,310	5/2001	Summerlin et al.		

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>FORM HDP-1449 (Based on Form PTO-1449)</b>  <b>PATENT AND TRADEMARK OFFICE</b> <b>INFORMATION DISCLOSURE CITATION</b> (Use several sheets if necessary)  Sheet 2 of 2	ATTORNEY DOCKET NO.	SERIAL NO.
	275M-000768	10/657,411
	APPLICANT	
	Mauer et al.	
	FILING DATE	GROUP
	September 8, 2003	3726

U.S. PATENT DOCUMENTS						
Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
22.		6,254,324	7/2001	Smith et al.		
23.		6,398,472	6/2002	Jones		
24.		6,418,599	7/2002	Suzuki et al.		
25.		6,428,255	8/2002	Smith		
26.		6,502,008	12/2002	Maurer et al.		

FOREIGN PATENT DOCUMENTS							
Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes	No
1.		EP 0351715	1/1990	epo		Abstract	
2.		DE 1625359	6/1979	Germany		Abstract	
3.		DE 2654718	6/1978	Germany		Abstract	

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)		
Ref. Desig.	Examiner's Initials	
1.		

Examiner:	Date Considered:
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EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.